

AMENDMENT TO THE DRAWINGS

The attached sheet of drawings includes changes to Figs. 4, and 5A-5C. This sheet, which includes Figs. 4 and 5A-5C, replaces the original sheet including Figs. 4 and 5A-5C.

Attachment: Replacement Sheet, one page

REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

The Examiner objected to Figs. 4 and 5A-5C for failing to be designated by a "Prior Art" legend. A replacement sheet is attached to this amendment in which the "Prior Art" legend is added to Figs. 4 and 5A-5C. The Examiner's acceptance of the replacement drawing sheet is requested.

Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuo (JP 09-047887) in view of Merz (US2004/0016121). The rejection is traversed for the following reasons.

The invention defined in claim 1 is directed to a production method for a circular body. According to the method, a rolled steel plate is cut into blanks, whereby the cut surfaces of the blanks are inclined relative to the thickness direction of the blanks (as shown in Figs. 2 and 3). The inclination of the cut surface on one side of the blank is in the reverse direction of the cut surface on the opposite side of the blank. The blanks are then roll-formed so that the cut surfaces are parallel with one another and such that the cut surfaces confront one another. The confronting surfaces are laser-welded together to form a cylindrical body. The cylindrical body is then formed into a circular body of a predetermined shape.

Nubuo teaches a manufacturing method of a tubular seaming fixture which prevents the formation of welding burs. The welding burs are prevented by

arranging a V-shaped opening on the inside surface of a cylindrical structure at the point where the two ends of a cut blank meet. The V-shaped opening is created by an inclination introduced to a portion of the cut faces when shear-forming rectangular blanks from a rolled steel sheet. Nubuo fails to teach the step of cutting the rolled steel plate such that the cut surfaces are inclined relative to the thickness direction of the rolled steel plate and such that opposing cut surfaces are inclined in a reverse direction from each other. It is submitted, as will be discussed further hereinafter, that Nubuo actually teaches away from the claimed inclination of the cut surfaces.

Merz teaches a method for producing a cam for a camshaft. The cam is produced by bending a profile strip until the two ends of the profile strip meet forming the cam shape (roughly egg-shaped). Merz teaches the profile strips having beveled edges, the beveled edges allowing the end faces to butt against one another over their area. There is no discussion in Merz of the angle of the bevel, and no particular importance is given to such bevel in the Merz reference.

Even if the references were properly combinable, there is no suggestion or motivation to combine the references in a manner resulting in the invention defined in claim 1. Nubuo teaches the presence of a gap between butt ends for improved welding. The Nubuo gap is V-shaped, and is taught as a method of reducing welding burrs. In view of Merz, if the references were combined, the result would logically be a cam shaft having beveled edges which provide for a gap, as taught by Nubuo, so as to reduce the occurrence of welding burs. Insofar as the gap provided by Nubuo is believed to provide an improved result (as opposed to flush-engaging surfaces that result in problematic welding burs) there is no reason in the art of

record to modify the Nubuo reference to include the beveled edge surfaces of Merz.

Further, the references teach opposite solutions to a similar problem, and as such teach away from their combination. Nubuo teaches a method of welding butt ends of a cut piece of sheet metal together so as to prevent welding burrs by providing a separation of the contact point of the end faces. Merz teaches beveling the edges of a profile strip so as to allow the butt ends to contact each other along their full area. In essence, the Nubuo reference teaches providing a space between the butt ends and Merz teaches eliminating the space. Thus, the references are at odds with one another, and one skilled in the art would not be motivated to combine the references in the manner required to arrive at the present invention.

As the references teach away from one another, even if combinable, they do not suggest a combination resulting in the invention defined in claim 1, the Examiner has failed to establish a *prima facie* case of obviousness. Consequently, reconsideration and withdrawal of the rejection to claim 1 is requested. Claim 2 depends from claim 1, and is likewise considered allowable over the art.

Further, it is noted that claim 2 defines a particular range of inclination angles that facilitates joining of the cut ends according to the method of claim 1. It is submitted that the Merz bevel does not teach or suggest such a slight angle of inclination. Obviously, the small angle of inclination provides an advantage and solves the problem encountered in the prior art, described in the background section of the present application, and is used for a particular purpose (to facilitate laser welding of the confronting surfaces). Therefore, the Examiner cannot simply conclude that the claimed angle of inclination is a mere matter of design choice. As such, it is submitted that claim 2 is independently patentable over the art of record.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. KOY-15743.

Respectfully submitted,

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